

Notice of Allowability

Application No.

09/473,868

Examiner

Abbas I Abdulsalam

Applicant(s)

HANAOKA ET AL.

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/16/04.
2. ☒ The allowed claim(s) is/are 1-17.
3. ☒ The drawings filed on 28 December 1999 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


XIAO WU
PRIMARY EXAMINER

: DETAILED ACTION

Allowable Subject Matter

1. The following is an examiner's statement of reasons for allowance:

Ohe et al. (USPN 6504594) teach a picture element electrode with an H-shaped structure, as shown in FIG. 4, a common electrode 5 with a cruciform structure, a part of each of the electrodes having a structure functioning as capacitance elements.

Regarding claim 1, none of the cited prior art teaches or suggests a method of driving a liquid crystal display device, said liquid crystal display device comprising: a first substrate; a second substrate opposing said first substrate with a gap there between; a liquid crystal layer confined in said gap; a thin-film transistor formed on said first substrate; a conductor pattern formed on said first substrate in electrical connection with said thin-film transistor, said conductor pattern supplying an alternate-current driving voltage signal to said thin-film transistor; a pixel electrode provided on said first substrate in electrical connection to said thin-film transistor; an auxiliary electrode having an H-shaped form including a pair of parallel conductor portions and a conductor portion connecting said parallel conductor portions, formed on said first substrate in the vicinity of said data bus line such that said parallel conductor portions extend along said data bus line and so as to form an auxiliary capacitance connected parallel to said pixel electrode said auxiliary electrode being disposed so as to induce a lateral electric field between said auxiliary electrode and said data bus line; and an opposing electrode formed on said second substrate; said method comprising the step of: applying to said auxiliary electrode a common voltage substantially equal to a central voltage of said alternate-current driving voltage signal, wherein the liquid crystal display device is a twisted-nematic type.

Regarding claim 8, none of the cited prior art teaches or suggests a liquid crystal display device, said liquid crystal display device comprising: a first substrate; a second substrate opposing said first substrate with a gap there between; a liquid crystal layer confined in said gap; a thin-film transistor formed on said first substrate; a data bus line formed in electrical connection with said thin-film transistor; a driving circuit supplying an alternate-current driving voltage signal to said thin-film transistor via said data bus line; a pixel electrode provided on said first substrate in electrical connection to said thin-film transistor; an auxiliary electrode having an H-shaped form including a pair of parallel conductor portions and a conductor portion connecting said parallel conductor portions, formed on said first substrate in the vicinity of said data bus line such that said parallel conductor portions extend along said data bus line and so as to form an auxiliary capacitance connected parallel to said pixel electrode said auxiliary electrode being disposed so as to induce a lateral electric field between said auxiliary electrode and said data bus line; an opposing electrode formed on said second substrate; and a direct-current source applying, to said auxiliary electrode, a common voltage substantially equal to a central voltage of said alternate-current driving voltage signal, wherein the liquid crystal display device is a twisted-nematic type.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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2. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas Abdulsalam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand delivered responses should be brought to Crystal Park II, Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.

Abbas Abdulsalam

Examiner

Art Unit 2674

January 17, 2005


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PRIMARY EXAMINER